



INSTITUTE FOR DEFENSE ANALYSES

NSD-5215

Lessons in Adaptability and Preparing for Black Swan Risks  
from the Military and Hedge Funds

William R. Burns, Jr.  
Drew Miller

June 2014

Institute for Defense Analyses  
4850 Mark Center Drive  
Alexandria, Virginia 22311-1882

Approved for public release;  
distribution is unlimited.  
IDA Log No. H 14-000700



*The Institute for Defense Analyses is a non-profit corporation that operates three federally funded research and development centers to provide objective analyses of national security issues, particularly those requiring scientific and technical expertise, and conduct related research on other national challenges.*

#### **About This Publication**

The views, opinions, and findings should not be construed as representing the official position of either the Department of Defense or the sponsoring organization.

#### **Copyright Notice**

© 2014 Institute for Defense Analyses  
4850 Mark Center Drive, Alexandria, Virginia 22311-1882 • (703) 845-2000.

NSD-5215

**Lessons in Adaptability and Preparing for Black Swan Risks  
from the Military and Hedge Funds**

**William R. Burns, Jr.  
Drew Miller**

June 2014



The authors are both retired O6 officers (Navy Captain, AF Colonel) who served in a variety of Pentagon and operational positions and currently serve as Research Staff Members at the Institute for Defense Analyses (IDA), a Federally Funded Research and Development Center. William Burns was a member of an IDA team that did pioneering work on improving adaptability training in the Department of Defense. Dr. Miller ran the strategic planning process at ConAgra Inc. and a management consulting firm.

## **Lessons in Adaptability and Preparing for Black Swan Risks from the Military and Hedge Funds**

By William R. Burns, Jr. and Drew Miller

“The CEO should regard his position #1 as the Chief Risk Officer. Now you have a lot of other functions too, but you should wake up every morning and think about ‘is this place built to take everything’?”

—Warren Buffet, Billionaire, Berkshire Hathaway CEO<sup>1</sup>

“The only surprise is that we’re surprised when we’re surprised.”

—Former Secretary of Defense Donald Rumsfeld<sup>2</sup>

There is widespread acceptance that the ability of a business to adapt rapidly in response to the accelerating pace of change in the business environment is essential to success and survival. Consultants like Gary Hamel argue convincingly that “in today’s fast-forward economy, irrelevancy is a bigger risk than inefficiency.” The plethora of new technologies and rapid change offer both tremendous opportunities and, for many companies, a very high degree of risk.

Nassim Taleb wrote persuasively about the need to prepare for catastrophic change in his seminal work on risk management, “The Black Swan: The Impact of the Highly Improbable.”<sup>3</sup> A Black Swan event is an outlier, something outside the realm of regular expectations, where nothing in the past can convincingly point to the real possibility it will occur or persuade us we need to prepare for its potentially dire consequences. But it is not an unimaginable event. Most major Black Swan events (9/11 attacks for example) are foreseen and often warned about, but the warnings tend to be ignored because of strong personal and organizational resistance to changing our opinions and standard procedures.

Considering how to respond to change should include consideration of the impacts of potential Black Swans. The key issue is how to do this cost effectively in the face of inherent human and organizational resistance to change?

---

<sup>1</sup> Warren Buffett, interviewed on FoxBusiness.com, January 2010.

<sup>2</sup> Donald Rumsfeld, *Rumsfeld’s Rules: Lessons in Leadership in Business, Politics, War and Life*, (New York Harper Collins, 2013), <http://rumsfeld.com/>.

<sup>3</sup> Nassim Nicholas Taleb, *The Black Swan: the Impact of the Highly Improbable*, 2nd edition, Random House, 2010.

Change is hard to achieve in any organization, and much more difficult in the federal government and Department of Defense (DoD). Yet even in the military, with rigid obedience to orders and hierarchy, subject to strict central control and bureaucracy, some leaders manage to change quickly and successfully. Taleb noted that “only military people deal with randomness with genuine, introspective intellectual honesty---unlike academics and corporate executives using other people’s money.”<sup>4</sup> This is primarily true at the tactical level, where the reality is “adapt or die.” The history of adaptation at the operational and strategic level is much more sobering.<sup>5</sup> Nonetheless, we believe the few people who have successfully changed DoD practices are particularly good at adaptation, overcoming constraints in an organization almost inherently hostile to adaptability. They offer great lessons for business managers.

Since the U.S. military provides both positive and negative lessons, this article also draws from successful hedge funds to lay out a thorough set of recommendations for making your organization more adaptable. Some hedge funds continue to prosper year after year in an industry that faces financial Black Swan risks that could destroy the entire firm (and cause immense collateral damage to the economy) because they employ powerful and sometimes controversial practices to enable successful change. Since many of Taleb’s lessons are drawn from his work as a financial operative, we also consider Taleb a source of adaptability best practices from the hedge fund industry.

We offer 14 lessons from military and hedge fund experiences on how to make your organization more adaptable and capable of avoiding, recovering from, or even profiting from Black Swan events.

The authors have worked in the military, business, and currently with the Institute for Defense Analyses (IDA) a Federally Funded Research and Development Corporation that acts as a think tank for the Office of the Secretary of Defense. IDA has conducted and supported several DoD studies on adapting to asymmetric threats and improving adaptability.<sup>6</sup> The definition of adaptability we recommend is based on studies conducted by IDA and the Defense Science Board: “the ability and willingness to prepare for change and to implement an effective response when change occurs.”<sup>7</sup>

In response to a tasking to identify training required to prepare U.S. forces to respond to asymmetric threats, IDA concluded that given the uncertainty of future threats, the key skill or attribute that individuals, units, and teams of commanders and leaders need to improve on is adaptability.<sup>8</sup> To be more adaptive, leaders at all levels, and particularly senior leaders, need to apply well-developed skills of critical and creative thinking, intuition (pattern recognition), self-awareness and self-regulation, and a variety of social skills...in varying combinations and across

---

<sup>4</sup> Taleb, p. 126

<sup>5</sup> Jim Lacey and LCOL Kevin Woods, “Adapt or Die,” *U.S. Naval Institute Proceedings*, August 2007, 19.

<sup>6</sup> Waldo D. Freeman and William R. Burns, Jr., *Developing an Adaptability Training Strategy and Policy for the Department of Defense (DOD)*, August 2010.

<sup>7</sup> Freeman and Burns; Defense Science Board, “Enhancing Adaptability of U.S. Military Forces,” Jan 2011, p. 1.

<sup>8</sup> John Tillson, et al., *Learning to Adapt to Asymmetric Threats*, IDA Document D-3114 (Alexandria, VA: Institute for Defense Analyses, August 2005).

a wide range of situations.<sup>9</sup> This research found that while training is important, education, career development, and organizational culture are even more vital in developing senior leaders able to adapt to a changing environment. For most companies, we believe adaptability is not just an issue of developing personnel who are more adaptable, but freeing employees from central regulation and restrictions without losing the efficiency and effectiveness of common purpose and central direction.

## **Part I: Accept the Need to Prepare for Black Swan Disasters**

### **1. Don't use the traditional risk matrix approach or guesstimate a probability of occurrence--expect the unexpected, plan and prepare for disaster mitigation**

The standard approach to risk management is estimating the likelihood of occurrence for bad events and likely consequences to prioritize high likelihood/high impact risks. A key point from *The Black Swan* is that guesstimating the probability of Black Swan events is not possible and likely counterproductive. Taleb's point is critical: don't try to predict the likelihood of a disaster, prepare for the impact.

*"The central idea of this book concerns our blindness with respect to randomness, particularly the large deviations. . . **Black Swans being unpredictable, we need to adjust to their existence (rather than naively try to predict them).** There are so many things we can do if we focus on anti-knowledge, or what we do not know. . . It is much easier to deal with the Black Swan problem if we **focus on robustness to errors rather than improving predictions.**"*

--Nassim Nicholas Taleb, "The Black Swan: the Impact of the Highly Improbable"

Many other policy analysts and business leaders advocate Taleb's view. The late Aaron Wildavsky, a president of the American Political Science Association and author of many books on public policy analysis contended that enhancing the capacity to cope with and adapt to surprises rather than trying to prevent all catastrophes in advance was the best course of action.<sup>10</sup>

A recent Defense Science Board study offered five major recommendations to promote adaptability in the Department of Defense including a call to prepare for degraded operations.<sup>11</sup> However, the potential for cyber-attacks, high altitude EMP detonations that fry computer chips, and bioengineered viral pandemics, among new and evolving threats, requires that not just the U.S. military, but the business community and society as a whole be prepared to respond to and recover from the catastrophic effects of such occurrences. In short, there is a need to adapt to an

<sup>9</sup> Waldo Freeman and William R. Burns, Jr., Developing an Adaptability Training Strategy and Policy for the Department of Defense (DOD), IDA Paper P-4591 (Alexandria, VA: Institute for Defense Analyses, August 2010).

<sup>10</sup> Aaron Wildavsky, *Searching for Safety*, 1988.

<sup>11</sup> Defense Science Board, "Enhancing Adaptability of U.S. Military Forces," Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, Jan 2011, p. vii.

environment where deterring or defeating an enemy or besting the competition in the world of business is not the only or highest priority concern.

Rather than trying to better predict the likelihood of new severe disasters that have never or very rarely occurred in the past (a fool's errand according to Taleb), we should try to operate on the assumption that they will eventually occur and position ourselves to survive them. This view calls for rejecting the traditional two axis risk matrix with consequence of event on one axis and probability of occurrence on the other. Defining "critical risks" that the organization should deal with as those with high consequences and high annual likelihood of occurrence means ignoring Black Swans and being unprepared to survive the consequences when they occur. The DoD does not attempt to guesstimate the likelihood of country X launching an attack, we try to field capabilities to defeat and deter any conceivable threat. The lead risk manager at Goldman Sachs, one of the few big Wall Street firms that did well during the 2007 economic collapse, said that he spent "98 percent of his time worrying about things with a 2 percent probability."<sup>12</sup> Ignoring low probability or unpredictable severe threats is a formula for catastrophic failure.

## **2. Look at a broad range of risks, with adaptive planning and red teams**

New technologies and rapid change create more risk of Black Swan disasters. A common problem with formal planning scenarios is failure to cast a wide enough net, or to recognize that one cannot imagine and cover all the Black Swan events an organization is likely to face.

The DoD switched to adaptive planning in the 1990s. Dr. Paul Davis, an architect of the change, believes that most Black Swan events can be anticipated, "but not which ones will actually occur."<sup>13</sup> By looking at a wide range of scenarios and lots of "what if" analyses of different enemy actions and a variety of capability options that the U.S. could deploy, analysts, operators, and decision-makers have been able to devise a more flexible and capable force. To expand the range of threats DoD considers, IDA developed the "Integrated Risk Assessment & Management Methodology" to encourage evaluators to address whatever scenarios they might imagine.<sup>14</sup> This structured approach to interviewing subject matter experts and discussing and evaluating their assessments permits the experts to rank risks as high as they want, unbound by the simple multiplication of probability (which you probably cannot estimate) and consequences.

DoD often employs "red teaming" to improve planning. The Red Team designs competitor's attacks, worst-case futures, and nightmare scenarios to challenge assumptions and examine how current plans are likely to fare. This normally produces changes and hedging options to provide more robust preparedness and less downside risk.

The goal is not to precisely predict the threats or to plan in detail, but to think through consequences of the bad event and to consider what measures might be possible now to improve prospects for dealing with the disaster. General Eisenhower wrote that "Plans are nothing; planning is everything." When Black Swan disasters hit, if you've anticipated them and conducted diverse "what if?" planning, you'll be better prepared to act.

---

<sup>12</sup> William Cohan, "How Goldman Sachs Made Money Mid-Crisis," *businessweek.com*, Sep 12, 2013.

<sup>13</sup> *Ibid.*

<sup>14</sup> James S. Thomason, IDA's Integrated Risk Assessment and Management Model, IDA P-4470, 2009.



### **3. Institute a technology watch program**

The Pentagon has program called Technology Watch/Horizon Scanning aimed at keeping the military ahead of technological developments. The program seeks to identify new technological developments that could be useful and identify emerging scientific concepts and technologies with disruptive potential.<sup>15</sup>

New Technologies are probably the leading source of Black Swan risks. Disruptive technologies that trigger sudden and unexpected effects are rarely a complete surprise. The technology that enables or precipitates the event often exists for years, though the effects may be cascading, nonlinear, and difficult to anticipate.<sup>16</sup>

Analyzing new technologies includes defining and looking for enablers and inhibitors of new disruptive technologies, assessing their likely impact, and postulating alternative futures. The goal is to increase the lead time for adoption of mitigating measures. In addition to extrapolating trends, analysts employ subject matter expert judgments, often using the Delphi method as well as gaming, scenario exercises, and modeling.<sup>17</sup>

There are many consulting firms offering technology *horizon scanning* and forecasting services.<sup>18</sup> If your goal is to be around for the long term and survive a coming jolt to your industry, you'd be wise to consider investing in longer term threat assessments and incorporating technology watch into your strategic planning process.

### **4. If possible, position your organization to benefit from Black Swan disasters**

Taleb advocates pursuing “anti-fragility,” creating opportunities where you can benefit if a Black Swan disaster strikes. He describes the “barbell strategy” of making small investments to generate some upside gain if the anticipated disaster occurs. Goldman Sachs exercised strong “mark to market” discipline and hedged against a mortgage market collapse in 2007, profiting when that happened.

Outside of financial hedging, there are not many things that gain from disorder that you can leverage to business advantage.<sup>19</sup> But there are always some product lines and services that will be in demand in the event of a viral pandemic or an economic collapse. And for lesser or more industry focused Black Swan events, the ability to keep operating or recover faster than competitors can yield huge payoffs.

A factory producing something that won't be needed post Black Swan event might be able to quickly convert to producing some vital necessity post event with some advance planning

---

<sup>15</sup> Ray Locker, “Pentagon on Watch for Disruptive Technology Worldwide,” USA Today, January 9, 2014, p. A1.

<sup>16</sup> Thomason., p. 2.

<sup>17</sup> Ibid.

<sup>18</sup> For example, Recorded Future, “Case Study: Technology Horizon Scanning,” [www.recordedfuture.com](http://www.recordedfuture.com).

<sup>19</sup> Nassim Taleb, “Anti-Fragile: Things that Gain from Disorder,” Random House, 2012.

and investment. Or the simple act of being able to retain production or recover faster when competitors with just in time delivery of everything are out of action could yield big returns. The Defense Logistics Agency stockpiles critical strategic materials that are vital for defense production and might be impossible to acquire or substitute for in a crisis.

Look for ways to position your company to survive and possibly benefit from the impact when disruptive technologies emerge or a Black Swan disaster occurs.

## **5. Promote FARness in system design**

Paul Davis, a leading DoD operations researcher and architect of the DoD shift to adaptable planning, recommended improving DoD resource management by emphasizing FARness: flexibility, adaptiveness, and robustness.<sup>20</sup> DoD has had a problematic history in this regard. Some recent attempts to push the limits of technology with aircraft, ships, and ground combat systems, have resulted in combat systems that are prohibitively expensive, fail to meet the requirements of FARness, or both. A Navy sonar program improved processing capability 12 fold while reducing cost per processing cycle 50 times with by using flexible, open architecture with continuous improvements to the system, rather than trying to design and field the best possible dedicated system all at once.<sup>21</sup>

A FARness approach looks at needs and performance across a wide scenario space, not trying to optimize for a narrow set of circumstances. This approach would not identify just one best system or way of doing things, but instead allow selection of two, three, or four systems if the collection of systems offers better FARness over the range of scenarios.

Taleb offers similar advice: “Avoid optimization; learn to love redundancy. .. Overspecialization also is not a great idea...”<sup>22</sup> If you can afford to deal with the current cost disadvantage, rejecting the more specialized, complex, focused systems for a more balanced, resilient system better able to handle more contingencies may be the better choice. Depending on the context, Black Swan risks and adaptability may also argue for having some old fashioned systems in the inventory that enable operations when contemporary systems are rendered inoperative... without the Internet or overnight deliveries. Taleb argues that “Redundancy equals insurance. . . . The exact opposite of redundancy is naïve optimization. . . . An economist would find it inefficient to maintain two lungs and two kidneys.”<sup>23</sup>

A strong case can be made for leaving vacant space, running extra empty conduit, other low (but extra) cost features that can make a building or operation more flexible and robust. Just in time delivery, no inventory or spare parts, creates huge risks—and denies your firm the opportunity to produce and sell at high profits when others are shut down (achieving some “anti-fragility”).

---

<sup>20</sup> Dr. Paul Davis, RAND, “Methods and Tools for Portfolio Analysis,” Military Operations Research Society QDR Conference, Jan 13, 2009.

<sup>21</sup> Defense Science Board, p. 7-8.

<sup>22</sup> Nassim Nicholas Taleb, *The Black Swan: the Impact of the Highly Improbable*, 2nd edition, Random House, 2010, pp. 133, 371, 375.

<sup>23</sup> Taleb, BS, p. 312.

## Part II: Build Adaptability in your Organization

### 6. Hire, educate and promote to grow critical thinkers in your organization with the requisite relational skills

Taleb makes the case that we are physically/psychologically programmed to make common misjudgments. *The Black Swan* lays out 27 thinking errors that lead us to be blind to disaster. Much of our training in statistics and management teaches bad habits, foolish use of the “normal distribution” and standard deviation.

If leaders are to be prepared to adapt to the rapid changes occurring everywhere, to cope with uncertainty, and to respond to the inevitable Black Swans, continuing education must be a part of their experience and preparation for leadership. Major parts of the military emphasize this, but few businesses do. The education of potential leaders must be continued in a purposeful way in acknowledgment of a complex and changing world and the need for evolving personal growth and expanded perspective on the part of each individual. And established leaders need time away from work and decision making in order to replenish the capital in their intellectual accounts in preparation for future challenging leadership roles.

General H. R. McMaster, a recognized adaptive Army leader, emphasizes not just the value of education and experience but the importance of taking time to “reflect on those experiences and prepare for the next level of responsibility. This type of learning is what helps us gain the breadth and depth of knowledge that allows us to adapt to unforeseen challenges and circumstances.”<sup>24</sup> General Billy Mitchell, a leader in adapting to the advent of air power, “regularly made time to systematically process his experience by writing down his daily observations and analyzing what they meant.”<sup>25</sup>

In our studies at IDA, we found that producing adaptive leaders requires the development of cognitive skills (intuition and critical and creative thinking), as well as self-awareness, self-regulation and a variety of relational skills.<sup>26</sup>

Studies have shown that people in every field make decisions based on intuition.<sup>27</sup> “...what enables us to make good decisions is intuition, in the form of very large repertoires of patterns acquired over years and years of practice.”<sup>28</sup> Intuition allows individuals to translate experience and the related “tacit knowledge”<sup>29</sup> into action.<sup>30</sup> Therefore it is important to identify

---

<sup>24</sup> Andrew Edrman, “How militaries learn and adapt: An interview with Major General H. R. McMaster,” McKinsey Quarterly, McKinsey & Company, April 2013, p. 1.

<sup>25</sup> Bert Frandsen, *Learning and Adapting: Billy Mitchell in World War I*, Joint Forces Quarterly, 1<sup>st</sup> Quarter 2014, p. 101.

<sup>26</sup> John Tillson, et.al., ...Waldo Freeman and William R. Burns, Jr.

<sup>27</sup> Gary Klein, *The Power of Intuition*, New York, Doubleday, 2003, p. iv.

<sup>28</sup> Ibid., p. 5-6.

<sup>29</sup> The concept of tacit knowledge as an aspect of practical intelligence and the ability to adapt is discussed at length in Robert J. Sternberg, George B. Forsythe, Jennifer Hedlund, Joseph A. Horvath, Richard K. Wagner, Wendy M. Williams, Scott A. Snook, and Elena L. Grigorenko, *Practical Intelligence in Everyday Life*, (Cambridge, UK: Cambridge University Press), 2000. Sternberg and his colleagues define tacit knowledge as “...knowledge that

the types of experience and the range and the depth of experiences that will contribute most to the development of sound judgment in particular types of leaders. At the same time, leaders must be sufficiently self-aware to be able to recognize when past experiences leave them not just ill prepared but likely to react ineffectively or counterproductively to changed circumstances. One's intuition may simply be too limited when something fundamental has changed or a Black Swan threat looms that will shift the norm. But even in these cases, intuition may guide one toward contemplation of possible alternative courses of action.

Just as important as experience and the development of intuition and sound judgment is the continuing development of critical thinking skills. As described by Dr. Richard Paul and Dr. Linda Elder, critical thinking is the art of analyzing and evaluating thinking with a view to improving it.”<sup>31</sup> Critical thinking is particularly important in analyzing the assumptions that govern an existing situation and the assumptions that underlie potential adaptations to an evolving situation.

Critical thinking takes hard work to develop and constant practice to maintain. Derek Bok, the former president of Harvard University, observed: “Basic critical thinking skills are especially likely to remain when they are properly taught, because they are learned through repeated practice and continually used and reused in everyday life after students graduate.”<sup>32</sup> However, Bok noted that “Many [graduates] cannot reason clearly or perform competently in analyzing complex, non-technical problems, even though faculties rank critical thinking as the primary goal of an education.”<sup>33</sup> It is important to assess not just the academic degrees of a job applicant, but evidence of the extent to which they have developed their critical thinking skills.

Potential leaders, no matter how smart they are, must also have well-developed relational skills, beginning with self-awareness and self-regulation. Self-awareness is the ability of an individual to understand himself in a truly objective manner, including the way in which he is perceived by others. Equally important in working as part of an adaptive team is self-regulation. Daniel Goleman, in his seminal article on emotional intelligence, defines self-regulation as “the ability to control or redirect disruptive impulses and moods [and] the propensity to suspend judgment—to think before acting” and describes the hallmarks of self-regulation as: “trustworthiness and integrity, comfort with ambiguity, [and] openness to change.”<sup>34</sup>

Of fundamental importance is recognition that major accomplishments are not the product of individual effort, but are the work of teams and teams of teams. Therefore the social and relational skills necessary to work within a team or lead a team are critical. These skills include, among others, the ability to listen, to empathize, to be politically aware, to communicate effectively, to manage conflict, and to cooperate and collaborate.

---

reflects the practical ability to learn from experience and to apply that knowledge in pursuit of personally valued goals. Tacit knowledge is needed to successfully adapt to, select, or shape real-world environments.” 104.

<sup>30</sup> Klein, pg. 4.

<sup>31</sup> Richard Paul and Linda Elder, *The Miniature Guide to Critical Thinking: Concepts and Tools*, (Foundation for Critical Thinking, 2006), 4.

<sup>32</sup> Derek Bok, *Our Underachieving Colleges*, (Princeton, NJ: Princeton University Press, 2006), 123-124.

<sup>33</sup> Ibid. 8.

<sup>34</sup> Daniel Goleman, “What Makes a Leader?” *Harvard Business Review* (November-December 1998): 95.

Comfort with ambiguity, in particular, is essential to adaptive performance. Researchers from the Netherlands and Australia, in a paper presented at the 14th International Command and Control Research and Technology Symposium, emphasized this quality, along with openness to learning, a habit of thoughtful self-reflection, and a tolerance for others being wrong, in describing what is required for individuals, teams, and larger groups throughout an organization that seeks to be adaptive. Ever-present must be the question: “how would I know if I was wrong about this?”<sup>35</sup>

An organization can contribute to the development of these relational skills in individuals through education and training opportunities; effective evaluation procedures, including 360-degree evaluations; individual mentoring; maintaining a culture of organizational openness; and promotion policies which reward those who have shown a commitment to and an ability to become socially savvy.

## **7. Encourage humility, unlearning, and abandonment**

Taleb believes “We humans don't know how to say 'I don't know'.”<sup>36</sup> We consistently overestimate our understanding of issues and underestimate or ignore what we don't know. Taleb credits the military with more honest admission of not knowing; with terms like “unknown unknowns” (as opposed to known unknowns) to help emphasize the existence and danger of Black Swan risks.<sup>37</sup> The military for centuries has appreciated the “fog of war”, the term Clausewitz used to describe the inherent confusion on the battlefield in the face of incomplete and often false information, emotion and panic. Colin Powell laid out four rules for good intelligence: “Tell me what you know. Tell me what you don't know. Then tell me what you think. Always distinguish which is which.”<sup>38</sup> In his early days of commanding a division in Iraq, General David Petraeus advised that “A certain degree of intellectual humility is a good thing. There aren't always a helluva lot of absolutely right answers out there.”<sup>39</sup> While a Colonel, commanding in Iraq in 2006, McMaster described the situation as “so damn complex. If you ever think you have the solution to this, you're wrong, and you're dangerous. You have to keep listening and thinking and being critical and self-critical.”<sup>40</sup>

Staying humble with regards to what you think you know is sound but very difficult advice. Losing battles and suffering deaths in a war provide great motivation to adapt—but how do you get people to be so self-critical and diligent in critical thinking in the normal course of business?

---

<sup>35</sup> Mink Spaans, Maartje Spoelstra, Erik Douze, Reinout Pieneman, Anne-Marie Grisogono, “Learning to be Adaptive,” 14<sup>th</sup> International Command and Control Research and Technology Symposium, Washington, DC, 2009.

<sup>36</sup> Nassim Taleb, in debate on religion: Hitchens, Harris, Dennett vs. Boteach, D'Souza, Taleb, [http://www.youtube.com/watch?v=-hnqo4\\_X7PE](http://www.youtube.com/watch?v=-hnqo4_X7PE)

<sup>37</sup> Taleb, *Black Swan*, p. 127.

<sup>38</sup> Colin Powell, “It Worked for Me in Life and Leadership,” Harper Collins, 2012.

<sup>39</sup> MG David Petraeus, Cdr 101st Airborne Division, Iraq, 2004, quoted in *Washington Post National Weekly*, March 15-21, 2004, p. 7.

<sup>40</sup> Colonel H.R. McMaster, quoted in George Packer, “The Lesson of Tal Afar: Is it too late for the Administration to correct its course in Iraq?”, *New Yorker*, April 2006.

Air Force Colonel John Boyd was one of the greatest military thinkers the U.S. has produced. From fighter tactics and aircraft design to maneuver strategy, Boyd made tremendous contributions to military reform. Always described as a maverick, Boyd was an aggressive free thinker, who, like Taleb, stressed the critical importance of “unlearning”, letting go of past ways of thinking. Unlearning or “unfreezing” is a key part of a change process. To come up with new ideas, adapt to changing circumstances, you have to abandon old concepts. A widely quoted Zen proverb is “Knowledge is learning something every day. Wisdom is letting go of something every day.” It’s much harder to let go than to learn. Boyd taught his disciples to mine useful ideas from anywhere and avoid becoming a devotee of any specific school of thought.<sup>41</sup> Peter Drucker argued for unlearning in his book *The Age of Discontinuity*: “During periods of discontinuous, abrupt change, the essence of adaptation involves a keen sensitivity to what should be abandoned—not what should be changed or introduced. A willingness to depart from the familiar has distinct survival value.”<sup>42</sup>

Powerful, successful CEOs in particular need to be on guard to ensure that they and subordinates have the integrity and courage to admit that a great idea didn’t work, cut losses, and move on. Later best practices covered in this article suggest ways to increase the likelihood that associates will really tell you what they believe and think, especially when their thinking is outside the box.

## **8. Conduct training and exercises in adaptability and disaster recovery**

While the military admittedly has the “luxury” of being able to conduct exercises that test out plans under difficult condition, organizations committed to long term survival also need to devote time and effort preparing to deal with disruptive events.

McMaster stresses training soldiers on how to adapt, not just memorize procedures:

“we train them on fundamentals, we also test their ability to observe changes in the environment and to adjust as necessary so they can accomplish their mission. ...we are evaluating them on their ability to innovate and adapt to unforeseen conditions.”<sup>43</sup>

Whether it’s a super volcano, meteor strike, nuclear accident, war, or some Black Swan not currently envisioned, there are some fundamental aspects of communicating with your employees, protecting your business’ assets and infrastructure, and preparing for an orderly shutdown and restart of operations that can be improved with practice. Your exercise and analysis might determine that adding inventory back for key items A and G, and sourcing X domestically would add little to your costs, but significantly improve your ability to recover. If all your competitors do low cost, just in time sourcing from Asia and you’re the only one who can still produce when a calamity occurs, you’ve turned this Black Swan into a White Swan—you have some anti-fragile positioning.

To train for improved adaptability, you need to progress in complexity and difficulty so participants reach a failure point.<sup>44</sup> Let people experience struggling with uncertainty and

---

<sup>41</sup> Richards.

<sup>42</sup> Peter Drucker, “The Age of Discontinuity,” .....

<sup>43</sup> McMaster, quoted in Erdman, McKinsey article.

<sup>44</sup> Defense Science Board, p. 109.

impossible situations. Don't just have a plan for dealing with a power outage, pick a time when the business can afford a shutdown (without telling plant manager) and pull the plug. Let the system and the people deal with the real pain and work of recovering. This is what Warren Bennis and Robert J. Thomas described in an earlier HBR article as "crucible" experiences that shape leaders. Bennis and Thomas refer to "intense, often traumatic, always unplanned experiences that had transformed [leaders] and had become the sources of their distinctive leadership abilities."<sup>45</sup>

"Billy Mitchell's experience in World War I is an ironic story of learning and adapting. Each setback he experienced could have been, and probably was, perceived as a failure...the irony is that without these setbacks, he would not have had such ideal opportunities to learn."<sup>46</sup>

Get the management team away from their day-to-day jobs for a well-planned, realistic assessment of what you would do if all your key suppliers in Asia couldn't send you anything for three months. Such an exercise not only prepares a group for dealing with possible Black Swan situations, but, as with military decision making exercises, enhances the intuitive decision making capability of an organization's leaders. At ConAgra we did several "wargames" where the management team debated (and competed as rival companies) on how to deal with a variety of future scenarios, such as new technologies and regulatory changes. In dealing with simulated supply cut-offs, internet failures, or a competitor's new product that renders your best seller obsolete, you may not only improve the adaptation skills of your associates, but discover new business opportunities as well.

## **9. Improve your organization's OODA Loop to react faster and more effectively than competitors**

Boyd provided a treasure trove of great ideas, but his Observe-Orient-Decide-Act "OODA Loop" is the most remembered. The OODA loop explains how the competitor who can orient or understand changing situations better and faster achieves decisive advantage. Boyd emphasized the need to constantly get feedback while you're attempting to implement your policies and disrupt competitors—"operating inside their OODA loop."<sup>47</sup> Boyd was a fan of Toyota's business strategies and saw their success as an example of being better and faster in executing the OODA loop.

In Iraq and Afghanistan, General McChrystal commanded our special operations forces, making dramatic improvements in their OODA loop to defeat insurgent networks that were very adaptive, operating without any bureaucratic oversight. In essence, McChrystal's team transformed a traditional military structure into a flexible, empowered network that could act faster than the enemy's network.<sup>48</sup> Achieving that goal was an iterative process that required

---

<sup>45</sup> Warren G. Bennis and Robert J. Thomas, "Crucibles of Leadership," Harvard Business Review, September 2002.

<sup>46</sup> Frandsen, 101.

<sup>47</sup> Chet Richards, "Interview with Chet Richards," Sonshi.com, <http://www.sonshi.com/richards.html>.

<sup>48</sup> Ibid.

extensive learning throughout the development process<sup>49</sup> Adapting is hard work and not accomplished in a single step.

## **10. Use Auftragstaktik to empower lower level managers ability to adapt**

The best adaptive capability we've got in the military is exhibited by soldiers and young officers adapting in battle. The examples of U.S. Special Forces on horseback in Afghanistan and military men and women in Iraq performing duties they had never been trained for, improvising constantly to deal with bad situations, are case studies in bold, successful adaptation. A decisive example was when Al Qaeda in Iraq took actions that led many Sunni insurgent allies to break with them. Army and Marine officers quickly moved to assist and ally with insurgents they had just been fighting. Some officials in the military and State Department objected, but the decisive change was made, and we promoted the "Anbar Awakening" and its expansion across Iraq. It is likely future studies of the Iraq campaign will conclude that this movement was at least as important as the surge in U.S. forces.<sup>50</sup>

Getting bureaucracy to loosen up to enable adaptability is difficult, especially with the federal government's regulatory labyrinth. One of the officials who was most effective at cutting red tape in the DoD was Robert Stone. Bob Stone spent thirty years in the federal government, most of them as a battered reformer in DoD and the last four leading the famous "Reinventing Government" effort of Clinton/Gore. Stone was a pioneer of eliminating central control and regulations, readily granting waivers to regulations that remained in order to empower adaptability at the local level. In his book *Confessions of a Civil Servant*, Stone explains why and how he "fought to decentralize and deregulate the bureaucracy to free them to serve America better."<sup>51</sup> Stone insisted that "the best decisions are made by the people closest to the action with the biggest stake in the outcome."<sup>52</sup> Taleb argues similar points in his books, insisting that people with no "skin in the game" should not be allowed to make decisions and take risks at the expense of others; condemning bureaucrats and bankers who exert too much control.<sup>53</sup> As a DoD official overseeing installations, Stone worked to replace thousands of pages of regulations with one page high level guidance. As head of the Clinton/Gore Reinventing Government effort, Stone's reform team assembled forklifts stacked ten feet high with federal rules they proposed eliminating. Rigid central control is the enemy of adaptability.

An Air Force manual illustrated how not to enable local adaptation: "Major commands and units are encouraged to develop supplemental guidance [but] Supplemental guidance must be as restrictive as, and not contradict, higher headquarters publications."<sup>54</sup> The Defense Science Board study insisted that DoD must "move from a risk-adverse to a risk-managed approach by

---

<sup>49</sup> Ibid. p. 69.

<sup>50</sup> Richard Polin, US Army Colonel, Ret, Institute for Defense Analyses, interview, March 2013.

<sup>51</sup> Bob Stone, *Confessions of a Civil Servant*, Rowman & Littlefield Publishers, 2003, p. xix.

<sup>52</sup> Ibid, p. 22.

<sup>53</sup> Taleb, *AntiFragile*, pp. 5-6.

<sup>54</sup> Air Force Manual 10-2602, "Nuclear, Biological, Chemical, and Conventional (NBCC) Defense Operations and Standards," 29 May 2003, p. 7.



using waivers to identify and eliminate unnecessary or restrictive processes” and “reward adaptability”.<sup>55</sup> Accomplishing this is a constant challenge in DoD and all large organizations.

AF General Bill Creech was famous (written up in Tom Peters book, *A Passion for Excellence*) for enabling and inspiring airmen to take responsibility and thus pride in their work. Creech was an ally of Stone in his military reforms and described the effort as “a war between the people who are trying to do something and the people who are trying to keep them from doing anything wrong.”<sup>56</sup> The latter strategy is all too common among senior bureaucrats and military leaders: avoid mistakes, don’t take risks, promote the system—don’t challenge it. Many large corporate staffs make this same mistake.

The power of freeing low level managers to adapt is illustrated by the German Wehrmacht in WWII, and its blitzkrieg successes. They used “Auftragstaktik”, which best translates as “flexible mission orders.” The term subsumes the ideas of individual initiative, prudent risk taking, and independent decision-making by the local commander, adapting as the situation dictates to accomplish the higher command’s very general order.<sup>57</sup> But the German Army is not alone in history with this idea. General George Patton put it this way in a quote I had to memorize as an Academy cadet: “never tell people how to do things—tell them what to do and they will surprise you with their ingenuity.” Britain’s national hero Admiral Nelson was said to have quipped that an order is a good basis for discussion. He often “modified” orders he received from superiors and, as senior commander, encouraged his subordinates to challenge his views.<sup>58</sup> Boyd hated not just large central staffs and unnecessary rules, but any form of political correctness.

Stone noted that the “simultaneous loose-tight properties” espoused by Peters and Waterman in *In Search of Excellence*<sup>59</sup> are great advice for improving adaptability.<sup>60</sup> With a clear, compelling corporate vision and overall strategy, combined with employees who are empowered to adapt and act within limited guidelines, you can have unity of purpose and central direction without the excessive controls and bureaucracy that stifle adaptability and creativity—and drive innovative talent away.

Recently, troops who had successfully adapted in the fighting in Iraq and Afghanistan, free from many of the bureaucratic constraints of headquarters, have bristled at returning to central control. A 2011 Harvard study surveying 250 former junior officers who left the military between 2001-2010, revealed that the second most frequently reported reason for leaving was frustration with military bureaucracy.<sup>61</sup> The former head of Personnel in the DoD, Dr. David

---

<sup>55</sup> Defense Science Board, p. vii.

<sup>56</sup> General Bill Creech, quoted in Bob Stone, *Confessions of a Civil Servant*, p. 32.

<sup>57</sup> David Keithly and Stephen Ferris, “Auftragstaktik, or Directive Control, in Joint and Combined Operations,” *Parameters*, Autumn 1999, p. 118.

<sup>58</sup> Keithley and Ferris.

<sup>59</sup> Tom Peters and Robert Waterman, “In Search of Excellence.”

<sup>60</sup> IDA Bob Stone interview.

<sup>61</sup> Sayce Falk and Sasha Rogers, *Junior Military Officer Retention: Challenges and Opportunities*, Harvard University, John F. Kennedy School of Government, March 2011. In another survey of West Point graduates, 82% of responding veterans who had left the Service gave as the top response for why they left “frustration with military bureaucracy.” Tim Kane, *Why Our Best Officers are Leaving*, *The Atlantic*, January 2011, p 80-85.

Chu, now President of the Institute for Defense Analyses, noted that “too often, the most promising, adaptive people depart the military.”<sup>62</sup>

Companies face very similar challenges. Bright young people not tied to established ways of doing business, are energized by the opportunity to use their imaginations to accomplish a task or solve a problem. The challenge is for senior leaders to recognize the changing business environment, to let go of ways of doing business that they themselves developed, set new courses for the company that are responsive to the changes occurring in the marketplace, and foster and be receptive to adaptive thinking by young people.

Troops and young managers in the trenches will adapt without threatening the overall success of the endeavor. In fact if adequately supported, they are the ones most apt to insure success. Leadership is very much about serving those being led. Mike Harper, a very successful CEO running ConAgra Inc. and then RJR Nabisco, used to say: “All plans are firm until changed.”<sup>63</sup> The military, with all its elaborate planning, recognizes that the best plans will not survive first contact with the enemy. Harper ran ConAgra not as a centrally controlled corporation, but a collection of “independent operating companies” with a corporate staff charged with assisting the independent operating companies, not dictating to them.

## **11. Reward initiative and prudent risk taking**

Taleb wrote that “American culture encourages the process of failure; unlike the cultures of Europe and Asia where failure is met with stigma and embarrassment. America’s specialty is to take these small risks for the rest of the world, which explains this country’s disproportionate share in innovations.”<sup>64</sup>

Again, the military offers a largely negative example at the senior officer level. Marine Colonel Michael Wyly, one of a band of military reformers mentored by Boyd, wrote that “it is unfortunate that we have to think of him as a maverick. He should have been the norm: an independent thinker who did his own research on a daily basis and espoused his views regardless of convention because he had the courage to do so.”<sup>65</sup>

A *New Yorker* article on the seemingly impossible effort to win the war in Iraq in 2006 described the renegade Colonel H.R. McMaster and his unit as “rebels against an incoherent strategy that has brought the American project in Iraq to the brink of defeat.”<sup>66</sup> The reporter found that “individuals and units within the Army could learn and adapt” because they recognized the failure of current strategy and the need to change course. Secretary of Defense Rumsfeld opposed recognizing the existence of the Iraqi insurgency or even allowing the use of the term.<sup>67</sup> McMaster understood the need for Auftragstaktik and prudent risk taking:

---

<sup>62</sup> Interview with Dr. Chu at IDA, .....

<sup>63</sup> Charles Mike Harper, CEO of ConAgra Inc and then RJR Nabisco. Quote recorded by Drew Miller while working for Mr. Harper in ConAgra Corporate Planning and Development, late 1980s.

<sup>64</sup> Taleb, *Black Swan*, p. 204.

<sup>65</sup> Marine Colonel Michael Wyly, quoted in *The Pentagon Labrynth: 10 Short Essays to Help You Through It*,” p. 58.

<sup>66</sup> Packer article.....

<sup>67</sup> Ibid.

“Commanders and senior civilian officers must be willing to underwrite mistakes, mistakes of commission should be tolerated, passivity should not.”<sup>68</sup>

In the military, to reach the top and get your stars you generally “follow the path” of promotion and safe practice that those ahead of you have trod—most importantly, avoid mistakes—that’s the advice, that’s what works. It’s the opposite of innovation. Adapting takes you off the approved path, where you’ll inevitably stumble at times.

Yale professor William Deresiewicz, in a widely publicized lecture at West Point, explained the bureaucratic conundrum: “Why is it so often that the best people are stuck in the middle and the people who are running things—the leaders—are the mediocrities? Because excellence isn’t usually what gets you up the greasy pole. What gets you up is a talent for maneuvering. . .not taking stupid risks like trying to change how things are done or question why they’re done.”<sup>69</sup>

In much the same vein is a military saying that the smartest officers are the colonels who never get promoted to general.<sup>70</sup> Recognizing this, “former Secretary of the Army, Pete Geren, forced [Generals] Petraeus and McChrystal, then the two golden generals of the Army, to fly back from Iraq in late 2007 to serve on a promotion board--this at a time when both men were in essential jobs, one running the entire war and the other operating from the shadows to defeat the most irreconcilable of enemies.”<sup>71</sup> Geren knew that without these two unconventional leaders on the board, several stand-out officers would not get promoted. Most famously, Col H. R. McMaster, successful as a leader in Iraq who wrote “Dereliction of Duty,” an indictment of military leadership during the Vietnam War, had previously been passed over for promotion to general. The Petraeus-chaired board promoted McMaster and several other unconventional thinking colonels who had previously been passed over.

Professor Deresiewicz urged cadets to fight bureaucratic conformity by thinking both critically and independently, challenging routines, and taking risks.<sup>72</sup> Steve Jobs, in a commencement address to Stanford University students, urged “don’t be trapped by dogma, living with the results of other people’s thinking . . . Stay hungry. Stay foolish.” Jeff Bezos, Amazon’s founder and CEO, noted that “Small companies are good at taking risks; they have nothing to lose. Big Companies lose their way when they stop taking risks.”<sup>73</sup> All great advice; but hard to follow, and definitely not the norm.

---

<sup>68</sup> McMaster, quoted in Ricks in April 13, 2010 Foreign Policy.

<sup>69</sup> Deresiewicz.

<sup>70</sup> Sydney J. Freedberg Jr., “How To Get Best Military Leaders: CNAS Says Split Warriors From Managers,” *Defense Industry News*, October 25, 2013. <http://breakingdefense.com/2013/10/how-to-get-best-military-leaders-cn-as-says-split-warriors-from-managers/>.

<sup>71</sup> Renny McPherson, “The Next Petraeus,” *Boston Globe*, September 26, 2010.

<sup>72</sup> William Deresiewicz, “Solitude and Leadership,” lecture delivered to West Point cadets, printed in *The American Scholar*, Spring 2010.

<sup>73</sup> Jeff Bezos, quoted in *Forbes*, Nov 1, 1999.

## 12. Institute “radical openness” to promote challenging superiors

There is real resistance, tension, and difficulty getting people to change their minds. Nobel Economist Kenneth Galbraith observed that “faced with the choice between changing one’s mind and proving that there is no need to do so, almost everyone gets busy on the proof.” Announcing a DoD policy of encouraging people to “speak truth to power” would likely have little impact. Former Under Secretary of Defense, Dr. Chu reported that even when he asked people for their opinions, he often had to work to “pull” those opinions out.<sup>74</sup> With current cultural mores and perceived rewards/benefits of disagreeing with your boss, few are likely to respond to an “open door policy” on disagreements.

Bridgewater is the largest and arguably most successful hedge fund. A key reason for its success is a practice founder and CEO Ray Dalio promotes called “radical openness”; which does not just allow but requires employees to question anything and anyone, with total disregard to personal feelings or hierarchy, to probe for weaknesses and get at the truth. From the Bridgewater website:

“Above all else, we want to find out what is true and figure out how best to deal with it. We value independent thinking and innovation, recognizing that independent thinking generates disagreement and innovation requires making mistakes. To foster this thinking and innovation, we maintain an environment of radical openness, even though that honesty can be difficult and uncomfortable. At Bridgewater each individual has the right and the obligation to ensure that what they do and what we do collectively in pursuit of excellence makes sense to them. Everyone is encouraged to be both assertive and open-minded in order to build their understanding and discover their best path. The types of disagreements and mistakes that are typically discouraged elsewhere are expected at Bridgewater because they are the fuel for the learning that helps us maximize the utilization of our potential.”<sup>75</sup>

At Bridgewater, there is no worse offense than failing to speak out or failure to analyze. The organizational culture demands constantly being on guard for weaknesses and constantly looking for ways to improve and make money/avoid losses. Individual employees can, must, argue for a change regardless of existing policies or the position of the person whose ideas are being challenged.

Taleb gave a powerful reason why you need radical openness to improve your organization’s prospects for identifying and adapting for pending Black Swan disaster: “Once your mind is set with a certain view of the world you tend to only consider instances that appear to show you are right; helping you feel more justified in your views.”<sup>76</sup> Another IDA researcher,

---

<sup>74</sup> Dr. Chu interview.

<sup>75</sup> Ray Dalio, Bridgewater web page; March 2013, <http://www.bwater.com/home/culture--principles.aspx>.

<sup>76</sup> Taleb, p. 59.

writing on the subject of strategic planning, put it this way: “Where analysis is silent or inadequate, the personal beliefs of decision-makers fill the void.”<sup>77</sup>

McMaster believes “we need leaders who can adapt and innovate. . . . We need leaders who have physical and mental courage on the battlefield, of course, but also the courage to speak their minds and offer respectful and candid feedback to their superiors. Our leaders can’t feel compelled to tell their bosses what they want to hear.”<sup>78</sup>

You can find many examples of business leaders extoling the virtues of subordinates who challenge them when they are wrong. But these challenges are understandably rare given the risks to the subordinates and the pressures to be agreeable and supportive, not the naysayer. . Civility is essential to maintaining the social fabric, and the importance of teamwork cannot be forgotten. But for managers, consistent with other principles of effective leadership, a culture of radical openness that invites critical and creative thinking and demands speaking truth to power is vital for dealing with Black Swan risks and improving adaptability. Requiring, rather than “inviting” disagreement as Bridgewater does, is a better approach.

### **13. Demand accountability for results without punishing failures from thoughtful experimentation**

In *The Generals*, Thomas E. Ricks argues that “accountability is the engine that drives adaptability”<sup>79</sup> and takes the Army to task for failing, since World War II, to hold its leaders accountable. With the exception of one Corp Commander, the senior military leadership failed to suffer professionally from the several years of failure in Iraq.<sup>80</sup> Likewise with the Army’s pursuit of its Future Combat Systems--the largest, most ambitious planned acquisition program in the Army’s history. It began as an ill-defined concept and remained so for ten years despite mounting problems, with \$30 billion largely wasted. A Rand report cited failures due to unspecified assumptions, weak analysis, and mismanagement.<sup>81</sup> There was no accountability for the lack of critical thinking and failure to challenge the underlying assumptions upon which the program was allowed to drag on.

Too often today, military leaders rise through the ranks based on technical competence and are promoted to flag and general officer rank as a result of displaying unquestioning loyalty to a senior mentor, ardently championing and never challenging the leadership’s current agenda, adhering to political correctness, and making only safe decisions. Again Boyd provides a prime example: an independent thinker with tremendous contributions to improving national security

---

<sup>77</sup> Michael Fitzsimmons, “The Problem of Uncertainty in Strategic Planning,” *Survival*, Vol. 48 no. 4, Winter 2006-2007, p. 135.

<sup>78</sup> Ibid, p. 4.

<sup>79</sup> Thomas E. Ricks, *The Generals: American Military Command from World War II to Today*, The Penguin Press, New York, 2012

<sup>80</sup> George Packer, “The Lesson of Tal Afar: Is it too late for the Administration to correct its course in Iraq?”, *New Yorker*, April 2006. Lt Gen Sanchez never received his fourth star.

<sup>81</sup> Christopher G. Pernin, et. al., *Lessons from the Army’s Future Combat Systems Program*, Rand Arroyo Center, 2012, p. xvii.

and unmatched integrity and courage in presenting new ideas who was hounded by the Air Force and denied promotion.

Accountability does not mean punishment for failure when a review of the decision making process suggests it was valid. Soichiro Honda, Japanese engineer, industrialist, and founder of Honda, noted that “success is 99 percent failure.” Bridgewater’s success is due in large part to its radical openness and accountability, “a culture in which it is OK to make mistakes, but unacceptable not to identify, analyze, and learn from them.”<sup>82</sup> Warren Buffett makes the same point: “I’ve made lots of mistakes. I’m going to make more. It’s the name of the game. You don’t want to expect perfection in yourself.”<sup>83</sup> Constant learning and an iterative process of trial and error is essential in adapting and in preparing for Black Swans.

#### **14. Change the culture or your organization will revert to conservative standard operating procedures and business as usual**

While all the preceding measures can improve adaptability, they are likely to fail or soon succumb to standard operating procedures and central control unless there is a supporting culture to enable adaptability. Past HBR articles like Kotter’s “Leading Change: Why Transformation Efforts Fail” have explained how failure to change organizational culture leads to good adaptation failing to stick.<sup>84</sup>

The right balance and culture needs to empower challenges to authority in a constructive way, insuring central controls where vital but fostering maximum adaptation to overcome obstacles that stand in the way of achieving agreed upon goals.

The vast majority of Stone’s achievements in fighting bureaucracy and empowering change were fleeting successes. In an interview, Stone admitted that the reinventing government changes were largely small with “all efforts at decentralization always reverting back to central control.”<sup>85</sup> Adaptations did stick in some regulatory agencies that changed their fundamental approach from that of being policemen/prosecutors of bad businesses to that of being educators focused on helping businesses comply with the regulations. The attitude and cultural change agency wide enabled the successful, lasting organizational adaptation.<sup>86</sup> Stone recommended against promoting “best practices” that come from a local adaptation since central controllers will then try to force everyone to adopt them, whether they fit well or not.<sup>87</sup> In his consulting, Stone noted that aggressive CEOs were the worst at pushing for strong central control.

To learn techniques for rapid adaptation and for reforming organizational culture to foster and continue accruing the benefits of adaptable thinking, we recommend a case study about a

---

<sup>82</sup> Ray Dalio, Bridgewater, Summary of Principles, March 2013, <http://www.bwater.com/home/culture--principles.aspx>.

<sup>83</sup> Brude Upbin, “Their Message: Jay-Z and Warren Buffett talk with Steve Forbes about wealth, success and giving back,” Forbes, Oct 11, 2010, p. 54.

<sup>84</sup> John P. Kotter, “Leading Change,” Harvard Business Review on Change,” Harvard Business School Press, 1998.

<sup>85</sup> IDA phone interview of Bob Stone, August 2013.

<sup>86</sup> Ibid.

<sup>87</sup> Ibid.

U.S. Army cavalry squadron in Baghdad.<sup>88</sup> New enemy tactics that involved firing from crowded groups of innocent civilians along the road were inflicting heavy casualties on the unit, and the normal tactics to respond were not working. The unit's commander, Colonel John Richardson, assembled a group of enlisted and officer personnel with a propensity for innovation, a willingness to experiment and take prudent risks, and the ability to influence others. After introducing the challenge to the group, Colonel Richardson initially left so that the group could develop its own dynamic as it analyzed the challenge and began to propose possible means of defeating the enemy attacks. He urged them not to be constrained by existing doctrine or tactics. You should read "Real Leadership and the U.S. Army: Overcoming a Failure of Imagination to Conduct Adaptive Work," (download for free at <http://www.strategicstudiesinstitute.army.mil/pdffiles/PUB1095.pdf>) to study the techniques used to empower adaptation and then reform the culture. The best option that emerged was a combination of very high risk changes: putting rubber bullets in as their initial rounds (to fire into crowds to scare the attackers without killing innocent civilians), and removing some armor to improve visibility. Within the unit and without, there was strong opposition to the changes. As you'll read in the book, "the Army espouses the need for decentralized operations and operational adaptability, but the Army culture is driven by control, stability, and risk aversion."<sup>89</sup> Colonel Richardson's unit adopted the new tactics and they worked, but he knew the insurgents would continue to adapt and move on to another form of attack, so he continued to foster a culture of adapting within his unit. "The culture of experimentation and innovation took root, and success of imagination began to spill over to all endeavors."<sup>90</sup> They achieved impressive OODA loop speed in adapting faster than the insurgents. They tried new means and took more risk in working with local Iraqi units. "The success of exercising leadership by mobilizing the group to achieve adaptive solutions created a new culture of operational adaptability, which allowed the squadron to go beyond just defeating a tactical threat."<sup>91</sup> Ultimately, they took the offensive against the insurgents, and brought down the insurgent group that had survived and killed Americans for years.

Colonel John Richardson is a West Point graduate, drilled in rigid adherence to regulations, but also educated in critical thinking and leadership. He now promotes a leadership style that teaches people to learn and adapt rather than a style that emphasizes vision and direction. Richardson quotes General Stanley McChrystal, the former senior commander in Afghanistan, who argues a similar view for dealing with rapidly changing situations: "the senior guy isn't the expert these days", so senior leaders must learn from the bottom up and the group as a whole, not attempt top down dictation.<sup>92</sup>

---

<sup>88</sup> John B. Richardson, "Real Leadership and the U.S. Army: Overcoming a Failure of Imagination to Conduct Adaptive Work," Strategic Studies Institute, US Army War College, Dec 2011.

<sup>89</sup> Ibid.

<sup>90</sup> Ibid.

<sup>91</sup> John B. Richardson, "Real Leadership and the U.S. Army: Overcoming a Failure of Imagination to Conduct Adaptive Work," Strategic Studies Institute, US Army War College, Dec 2011.

<sup>92</sup> General Stanley McChrystal, quoted in John B. Richardson, "Real Leadership and the U.S. Army: Overcoming a Failure of Imagination to Conduct Adaptive Work," Strategic Studies Institute, US Army War College, Dec 2011, p. 78.

## Conclusion

The pace of change in so many areas of society underlines the importance of improving personal adaptive skills and building organizational culture that, together, enable effective responses to change. Taleb suggests the effects of Black Swan events have been increasing, accelerating as the world gets more complicated. New technologies bring new threats and urgency to the imperative of developing adaptability skills, more adaptable organizations, and increasingly adaptable mindsets whether engaged in national security or the challenges and complexities of business.

The military must be an adaptive organization to help enable national survival. To stay in front, be the best, avoid disastrous losses when things change, a Black Swan threat hits, Bridgewater insists its people must be “hyper realistic and hyper truthful.”<sup>93</sup> Wouldn’t you want this same commitment and capability in your organization?

Your organization needs a culture where everyone wakes up each morning thinking about threats and opportunities, how to be more adaptable and positioned to beat the competition with a faster OODA loop and the ability to survive the next Black Swan event.

---

<sup>93</sup> Bridgewater website.



REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. <b>PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.</b>					
1. REPORT DATE (DD-MM-YY) June 2014		2. REPORT TYPE Final		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE  Lessons in Adaptability and Preparing for Black Swan Risks from the Military and Hedge Funds				5a. CONTRACT NO. DASW01 04 C 0003	
				5b. GRANT NO.	
				5c. PROGRAM ELEMENT NO(S).	
6. AUTHOR(S)  Drew Miller, William R. Burns, Jr.				5d. PROJECT NO.	
				5e. TASK NO.	
				5f. WORK UNIT NO.	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Institute for Defense Analyses 4850 Mark Center Drive Alexandria, VA 22311-1882				8. PERFORMING ORGANIZATION REPORT NO. IDA NS Document D-5215	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Institute for Defense Analyses 4850 Mark Center Drive Alexandria, VA 22311-1882				10. SPONSOR'S / MONITOR'S ACRONYM(S)	
				11. SPONSOR'S / MONITOR'S REPORT NO(S).	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT  Change is difficult in any organization, especially huge Federal organizations like the Department of Defense (DOD). Yet even in the military, with rigid obedience to orders and hierarchy, subject to strict central control and bureaucracy, some leaders manage to change quickly and successfully. The few people who have successfully changed DOD practices are particularly good at adaptation, overcoming constraints in an organization almost inherently hostile to adaptability. They offer great lessons for business managers. Since the U.S. military provides both positive and negative lessons, this article also draws from successful hedge funds to lay out a thorough set of recommendations for making an organization more adaptable. This article offers 14 lessons from military and hedge fund experiences on how to make an organization more adaptable and capable of avoiding, recovering from, or even profiting from Black Swan events.					
15. SUBJECT TERMS adaptability, Black Swan risks, OODA loop, radical openness, change management, adaptive planning, technology watch, FARness, accountability					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT  UU	18. NO. OF PAGES  20	19a. NAME OF RESPONSIBLE PERSON Drew Miller
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U			19b. TELEPHONE NUMBER (Include Area Code) (703) 575-6624





